UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
BIN C15700
Seattle, WA 98115-0070

Refer to:
OSB2001-0215-FEC

April 22, 2002

Judy Levin, Acting Forest Supervisor
3160 NE 3rd Street
PO Box 490
Prineville, OR 97754

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act Essential Fish Consultation for the Rock Creek Bank Stabilization Project, John Day River Basin, Crook County, Oregon

Dear Mr. Schuyler:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) on the effects of the proposed Rock Creek Bank Stabilization Project in Crook County, Oregon. In this Opinion, NMFS concluded that the proposed action is not likely to jeopardize the continued existence of ESA-listed Middle Columbia River summer steelhead (*Oncorhynchus mykiss)*, or destroy or adversely modify designated critical habitat. As required by section 7 of the ESA, NMFS included reasonable and prudent measures with nondiscretionary terms and conditions that NMFS believes are necessary to minimize the impact of incidental take associated with this action.

This Opinion also serves as consultation on essential fish habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR Part 600.

If you have any questions regarding this letter, please contact David Landsman of my staff in the Oregon Habitat Branch at 503.230.5406.

Sincerely,

Russell M Strach for

D. Robert Lohn
Regional Administrator

cc: Jimmy Eisner, Prineville BLM
Dan Rife, Ochoco/Deschutes NF
Richard Vacirca, Ochoco NF
Jeff Dillon, USFWS
Tim Unterwegner, ODFW

Endangered Species Act - Section 7 Consultation
&
Magnuson-Stevens Act Essential Fish Habitat Consultation

BIOLOGICAL OPINION

Rock Creek Bank Stabilization
John Day River Basin
Crook County, OR

Agency: Ochoco National Forest

Consultation Conducted By: National Marine Fisheries Service, Northwest Region

Date Issued: April 22, 2002

Issed by: Russell M Strach for
D. Robert Lohn
Regional Administrator

Refer to: OSB2001-0215 FEC

TABLE OF CONTENTS

1. BACKGROUND

1.1 Background

On December 20, 2001 the National Marine Fisheries Service (NMFS) received a request from the Ochoco National Forest (ONF) for Endangered Species Act (ESA) section 7 formal consultation for the Rock Creek Bank Stabilization Project, located on Rock Creek, a tributary to the John Day River. This area is part of the Paulina Ranger District, ONF and is approximately 15 miles southwest of Dayville in Crook County, Oregon.

The ONF has determined that the Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) may occur within the project area. MCR steelhead were listed as threatened under the Endangered Species Act (ESA) on March 25, 1999 (64 FR 14517). NMFS designated critical habitat for MCR steelhead on February 16, 2000 (65 FR 7764) and applied protective regulations to MCR steelhead under section 4(d) of the ESA on July 10, 2000 (65 FR 42422).

The ONF is proposing to stabilize a series of 10 cutbanks along a 0.50 mile reach of stream in Rock Creek. The Rock Creek area has been grazed historically by cattle, which has caused degradation of riparian and aquatic habitat. Within the last three years, this area has been temporarily converted to sheep grazing. Since sheep grazing has been implemented, much of the riparian areas in Rock Creek have recovered. However, there are reaches of stream that are in need of other types of restoration efforts in order to achieve desired aquatic habitat conditions. This project will decrease undesired stream bank erosion and improve upon fisheries habitat conditions in Rock Creek.

The effects determination was made using the methods described in *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The ONF determined that the proposed action was likely to adversely affect the MCR steelhead.

This Opinion reflects the results of the consultation process. The consultation process involved a site visit and various correspondence and Level 1 communications to obtain additional information and clarify the biological assessment (BA). As appropriate, modifications to the proposal to reduce impacts to the indicated species were discussed and incorporated into the proposed action.

The objective of this Opinion is to determine whether the action to stabilize streambanks on Rock Creek is likely to jeopardize the continued existence of the MCR steelhead or destroy or adversely modify its critical habitat.

1.2 Proposed Action

The ONF is proposing to stabilize a series of 10 cutbanks along a 0.50 mile reach of stream in Rock Creek. The Rock Creek area is within the Bearskull Grazing Allotment and has been grazed historically by cattle. Cattle grazing in the upper headwaters of Rock Creek have resulted in degradation of riparian and aquatic habitat. Within the last three years the Bearskull Allotment has been temporarily converted to sheep grazing. Since sheep grazing has been implemented in

Bearskull much of the riparian areas in Rock Creek have recovered. However, there are reaches of stream that are in need of other types of restoration efforts in order to achieve desired aquatic habitat conditions. Table 1 displays the types of structures to be implemented that work with the streams pattern, profile, and dimension. This project will decrease undesired stream bank erosion and improve upon fisheries habitat conditions in Rock Creek.

Table 1: Project actions and locations

Site	***Legal Description***	***Comments***
1	T14S R24E S20 NW	Bank taper on entire length of cutbank
2	T14S R24E S20 NW	Log vein on upstream end of cutbank; Rootwad revetment on downstream end of cutbank
3	T14S R24E S20 NW	Bank taper on entire length of cutbank
4	T14S R24E S20 NW	Bank taper on entire length of cutbank
5	T14S R24E S20 NW	Rootwad revetment on upstream end of cutbank; Log vein on downstream end of cutbank
6	T14S R24E S20 NW	Rootwad revetment on entire length of cutbank
7	T14S R24E S20 NW	Bank taper on entire length of cutbanks
8	T14S R24E S20 NW	Log vein on upstream end of cutbank; Bank taper on downstream end of cutbank
9	T14S R24E S20 NW	Rootwad revetment on entire length of cutbank
10	T14S R24E S20 NW	Rootwad revetment on upstream end of cutbank; Bank taper on downstream end of cutbank

Structures will be designed to stabilize highly erosive stream banks. Logs will be obtained from surplus decks from past timber sale units located in other areas of the District. All structures will be keyed (dug) into the bankfull channel (as described in diagrams in the BA). Vein structures will have an average of 30 percent of each log buried, while rootwad structures will have 80 – 90 percent of the log buried. Logs will have an average length of 25 feet. Trenches in which the logs will be placed will have average dimensions of 2 feet wide by 2 to 4 feet deep by 15 feet long. Excavated vegetation will be conserved and used for site rehabilitation in and around the newly constructed structures. Geotextile material will be used to capture fine sediment during the construction stage. The captured fine sediment will be hauled to a designated rock pit. The construction phase of the project will be completed during mid-August and is consistent with Project Design Criteria (PDC) C1 and F1 (Table 2 of the BA). Riparian planting (willow, alder, and dogwood) will be conducted in the spring of 2004. Riparian plantings originate from a Forest Service-operated nursery program in which hardwood clones (transferred from the project area) would be used. This project (structures and riparian planting) will be monitored via photo points and other aquatic habitat inventories. Aquatic habitat inventories focus on investigating attributes of cross-sectional area, slope, pools, wood, shade, bedload particle distribution, and bank stability.

1.3 Biological Information and Critical Habitat

The MCR steelhead Evolutionarily Significant Unit (ESU) was listed as threatened under the ESA by NMFS on March 25, 1999 (64 FR 14517). Biological information concerning the MCR steelhead may be found in Busby et al. (1995, 1996). Critical habitat was designated for the MCR steelhead on February 16, 2000 (65 FR 7764). Critical habitat for MCR steelhead includes the major Columbia River tributaries known to support this ESU including the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, stream bank stability, input of large woody debris (LWD) or organic matter, and others.

On the ONF, MCR steelhead designated critical habitat is located in the Trout Creek Headwaters (HUC 1707030706), Hay Creek (HUC 1707030707), and Mud Springs (HUC 1707030709) watersheds in the Deschutes River basin, and in the Middle South Fork (HUC 1707020112), Lower South Fork (HUC 1707020113), Upper Middle John Day (HUC 1707020103), Rock Creek (HUC 1707020115), Mountain Creek (HUC 1707020117), Bridge Creek (HUC 1707020430), and Bear Creek (Bridge)(1707020431) in the John Day River basin.

1.4 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitats. This analysis involves the: 1) Definition of the biological requirements and current status of the listed species and 2) evaluation of the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: 1) Collective effects of the proposed or continuing action, 2) the environmental baseline; and 3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize the listed species, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates if the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. NMFS must determine whether habitat modifications appreciably diminish the value of critical habitats for both survival and recovery of the listed species. NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If

NMFS concludes that the action will destroy or adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

For the proposed action, NMFS' jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NMFS' critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for juvenile and adult migration, and rearing of the MCR steelhead under the existing environmental baseline.

1.4.1 Biological Requirements

The first step in the methods NMFS uses for applying the ESA section 7(a)(2) to listed steelhead is to define the species' biological requirements that are most relevant to each consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NMFS starts with the determinations made in its decision to list MCR steelhead for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally-reproducing population levels at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful spawning, adult and juvenile migration, and rearing. The current status of the MCR steelhead, based upon their risk of extinction, has not significantly improved since the species was listed and, in some cases, their status may have worsened. The serious declines in abundance in the John Day River Basin are especially troublesome, because the John Day River has supported the largest populations of naturally-spawning summer steelhead in the MCR ESU. The general pattern in abundance for these populations was a low point during the late 1970s followed by an increasing trend leading to peak counts during the late 1980s. In recent years, all populations have declined to lows that are similar to counts observed in the late 1970s.

1.4.2 Environmental Baseline

The current range-wide status of the identified ESU may be found in Busby, et. al. (1995, 1996). The identified action will occur within the range of MCR steelhead. The defined action area is the area that is directly and indirectly affected by the action. The direct effects occur at the project site and may extend upstream or downstream, based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed, where actions described in this Opinion lead to additional activities, or affect ecological functions, contributing to stream degradation. As such, the action area for the proposed activities includes the immediate portions

of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long-term. For the purposes of this Opinion, the action area is defined as the streambed and riparian habitat of the Rock Creek extending 50 feet upstream of the area of disturbance, and extending downstream from the area of direct disturbance to the extent a turbidity plume visible. Other areas of the John Day River watershed are not expected to be directly or indirectly impacted.

Rock Creek is a tributary of the John Day River. The Ochoco National Forest administers 35% of the Rock Creek watershed. A complex network of high gradient (2 – 10%) streams makes up the drainage pattern within the watershed, however, channel slopes are lower within the project area, with higher meander ratios. Rock Creek is characteristic of a Rosgen B2 stream type below the 38 road and transitions to a C4 type in the upper headwater reaches above the 38 road, with average bankfull widths of 45 feet (lower reaches) to 12 feet (upper reaches). Flow in Rock Creek can be classified as a snowmelt hydrograph, but does exhibit qualities of spring fed systems as well.

LWD along the entire length of Rock Creek can generally be found below ONF standards (2 pieces per 100 feet). LWD in Rock Creek functions as cover for fish, pool formation, and sediment traps. Due to the geomorphic characteristic of a B stream type, pools are found at low levels below the 38 road and are the result of LWD and boulder/bedrock material. Pool densities with the project area are at moderate levels (1.5 – 2 per 100 feet) and are formed as a result of meander scour and LWD. Bank stability with the project area is poor and is characteristic of a stream recovering from past timber and livestock management practices.

From the ONF boundary to the 38 road crossing, vegetation is comprised of contiguous forest stands made up of mixed conifer species. Riparian vegetation (mountain alder, willow, dogwood, etc.) is dominant at ½ bankfull width. Stream shading averages 40% in this stream reach. Above the 38 road, and within the project vicinity vegetation along Rock Creek, is characteristic of "stringer" (linear) meadow systems with riparian vegetation (mountain alder, willow, dogwood, etc.) dominate at ¼ bankfull width. Stream shading averages 35% in this stream reach. Average 7 day maximum water temperatures in Rock Creek are 63 - 70 degrees Fahrenheit (F) from July – September. Stream temperatures range from 46 – 57 degrees F (daily maximum) during times of steelhead migration and spawning (April – May). Rock Creek offers deeper temperature stratified pools to juvenile steelhead during summer months and plays an important role in rearing.

Based on the best available information on the current status of MCR steelhead range-wide, the population status, trends, and genetics, and the poor environmental baseline condition within the action area (as described in the BA), NMFS concludes that the biological requirements of the identified ESU area are not currently being met within the action area. Numbers of MCR steelhead are substantially below historic numbers. Long-term trends are decreasing. Recent droughts and change in ocean productivity have probably reduced run sizes. The river basin displays degraded habitat conditions resulting from agricultural practices, water diversions, road building, mining, forest management activities, and flooding.

Use of the *NMFS Matrix of Pathways and Indicators* (NMFS 1996) identified the following habitat indicators as either at risk or not properly functioning within the action area: Water temperatures, turbidity/sediment, LWD, pool frequency, width/depth ratio, streambank condition, floodplain connectivity, peak/base flows, drainage network increase, disturbance history and riparian reserves. Actions that do not maintain or restore properly functioning aquatic habitat conditions have the potential to jeopardize the continued existence of MCR steelhead.

1.5 Analysis of Effects

1.5.1 Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in the NMFS document, *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (1996). The effects of proposed actions are expressed in terms of the expected effect - restore, maintain, or degrade - on aquatic habitat factors in the project area.

The proposed action has the potential to cause the following impacts to threatened MCR steelhead or designated critical habitat:

1. Work in the active stream will be needed to conduct structure implementation, including approximately 10 hours of working with a walking backhoe (average of 1 hour per site). This has the potential to directly harm any rearing steelhead present.
2. The instream work has the potential to increase turbidity in the river. Larger juvenile and adult salmon appear to be little affected by ephemerally-high concentrations of suspended sediments that occur during most storms and episodes of snow melt. However, feeding and territorial behavior can be disrupted by short-term exposure to turbid water. Localized increases of turbidity during in-water work will likely displace steelhead in the project area and disrupt normal behavior. The effects are expected to be temporary and localized.
3. Aquatic invertebrates in the substrate within the immediate disturbed area will most likely die due to the placement of root wads and log veins, and lack of sunlight. It is anticipated that they will re-colonize these areas after completion of the project.
4. Excavated vegetation will be conserved and used for site rehabilitation in and around the newly constructed structures. Riparian vegetation removal may cause short-term bank instability, and some loss of riparian function (shade, secondary production, nutrient regulation, etc.) over the short term. These shrubs will be rooted for later planting after the excavation is completed.
5. Staging activities could potentially result in a spill of hazardous materials. In addition, operation of machinery within and near the river will increase the risk of a spill of hazardous material in the river.

The effects of these activities on MCR steelhead and aquatic habitat factors will be limited by incorporating construction methods and approaches described in the BA. These include:

1. All in-water work will be conducted during the ODFW in-water work period and approved extension of July 15 to August 31, 2001 (ODFW, 1996). Adult steelhead will not be migrating during that time period. Juvenile salmon may be rearing in the project area during the in-water work period. Any juveniles rearing in the project area have the potential to be displaced or killed during the in-water work.
2. Geotextile material will be installed to capture fine sediment during the construction stage. The captured fine sediment will be hauled to a designated rock pit. Proper implementation of erosion and sediment controls should be adequate to minimize sediment inputs into the river until vegetation regrowth occurs.
3. Mitigation for streambed disturbance and impacts to riparian vegetation will include re-planting of native materials. Excavated vegetation will be conserved and used for site rehabilitation in and around the newly constructed structures.
4. Hazardous materials, including fuel, will not be stored or transferred within 165 feet of the active flowing channel. No staging areas or parking areas will occur within 165 feet of the two-year floodplain. Areas for fuel storage, refueling and servicing will be located at least 200 feet from the flowing stream. This will reduce the likelihood of a spilled toxic substance reaching the river. Spill containment booms will be maintained on-site at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.

For the proposed action, NMFS expects that the effects of the proposed project will tend to maintain each of the habitat elements over the long term, greater than one year. However, in the short term, a temporary increase in sedimentation and turbidity, and disturbance of riparian and instream habitat is expected. Fish may be killed or temporarily displaced during the in-water work. The potential net effect from the proposed action, including proposed mitigation plantings, is the maintenance and restoration of functional steelhead habitat conditions.

1.5.2 Effects on Critical Habitat

NMFS designates critical habitat based on physical and biological features that are essential to the listed species. Essential features for designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. Critical habitat for MCR steelhead consists of all waterways below naturally-impassable barriers including the project area. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, stream bank stability, and input of LWD or organic matter.

The proposed actions will affect critical habitat. In the short term, a temporary increase of sediments and turbidity and disturbance of riparian and in stream habitats are expected. NMFS

does not expect that the net effect of this action will diminish the long term value of the habitat for survival and recovery of MCR steelhead.

1.5.3 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future state or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation." Other activities within the watershed have the potential to impact fish and habitat within the action area. A wide variety of actions occur within the John Day watershed. Non-federal activities within the watershed are expected to increase with a projected 34 percent increase in human population over the next 25 years in Oregon (Oregon Department of Administrative Services 1999). Thus, NMFS assumes that future private and state actions will continue within the watershed, but at increasingly higher levels as population density climbs.

1.6 Conclusion

After reviewing the current status of MCR steelhead, the environmental baseline for the action area, the effects of the proposed Rock Creek Bank Stabilization Project and cumulative effects, it is NMFS' opinion that this project, as proposed, is not likely to jeopardize the continued existence of MCR steelhead, nor is it likely to destroy or adversely modify designated critical habitat. NMFS applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse degradation of anadromous salmonid habitat due to substrate compaction, sediment impacts, in-water construction, and removal of riparian vegetation. These effects will be mitigated over the long term through the proposed mitigation planting. Direct mortality of juvenile steelhead may occur during the in-water work period of project activities.

1.7 Reinitiation of Consultation

As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained or is authorized by law and if: 1) The amount or extent of taking specified in the Incidental Take Statement is exceeded, 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent considered in this Opinion, or 3) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of authorized incidental take is exceeded, any operations causing such take must cease pending reinitiation of consultation.

2. INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

2.1 Amount and Extent of the Take

NMFS anticipates that the action covered by this Opinion is reasonably certain to result in incidental take of MCR steelhead because of detrimental effects from increased sediment levels (non-lethal) and the potential for direct incidental take during in-water work (lethal and non-lethal). Take resulting from the effects of other project actions covered by this Opinion is largely unquantifiable in the short term and not expected to be measurable in the long term. The extent of the take is limited to the action area of the project.

2.2 Reasonable and Prudent Measures

NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimizing the likelihood of take of listed fish resulting from implementation of this Opinion. These reasonable and prudent measures would also minimize adverse effects to designated critical habitat.

1. To minimize the amount and extent of incidental take from construction activities within the Rock Creek, measures shall be taken to limit the duration and extent of in-water work, and to time such work when the impacts to fish are minimized.
2. To minimize the amount and extent of incidental take from construction activities in or near the river, effective erosion and pollution control measures shall be developed and implemented throughout the area of disturbance. The measures shall minimize the movement of soils and sediment both into and within the river, and will stabilize bare soil over both the short term and long term.

3. To minimize the amount and extent of take from loss of instream habitat and to minimize impacts to critical habitat, measures shall be taken to minimize impacts to riparian and in stream habitat, or where impacts are unavoidable, to replace or restore lost riparian and instream function.
4. To ensure effectiveness of implementation of the reasonable and prudent measures, erosion control measures shall be monitored and evaluated both during and following construction and meet criteria as described below in the terms and conditions.

2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the ONF must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To implement Reasonable and Prudent Measure #1 (in-water work) above, the ONF shall ensure that:

    a. Passage shall be provided for both adult and juvenile forms of all salmonid species throughout the construction period. ONF will ensure passage of fishes as per ORS 498.268 and ORS 509.605 (Oregon's fish passage guidance).

    b. All work within the active channel of all anadromous fish-bearing systems, or in systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed within ODFW's in-water work period and approved extension (July 15th to August 31st, 2002). Any additional extension of the in-water work period will first require approval by NMFS.

    c. Alteration or disturbance of stream banks and existing riparian vegetation will be minimized. Where work below the 2-year flood elevation is necessary, a geotextile material shall be placed between the ground and the fill to maintain normal waterway configuration.

    d. Where fill material is used below the 2-year flood elevation, only clean, non-erodible, native river cobble will be employed. This material will be wrapped in a geotextile material to minimize sloughing and to facilitate removal.

    e. Excavation in the river for scaffolding placement will be done by hand.

    f. Dead, injured or sick listed species specimen:

        (1) If a dead, injured, or sick listed species specimen is found, initial notification must be made to the National Marine Fisheries Service Law Enforcement Office, in the Vancouver Field Office, 600 Maritime, Suite 130, Vancouver, Washington 98661; phone: 360/418-4246. Care should

be taken in handling sick or injured specimens to ensure effective treatment and care. Dead specimens should be handled to preserve biological material in the best possible state for later analysis of cause of death. With the care of sick or injured listed species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed.

(2) The ONF shall obtain written approval from NMFS for the transfer of any ESA-listed fish to third parties other than NMFS personnel requires.

2. To implement Reasonable and Prudent Measure #2 (pollution and erosion control), the ONF shall ensure that:

a. A Pollution and Erosion Control Plan (PECP) will be prepared and implemented. The ECP will outline how and to what specifications various erosion control devices will be installed to meet water quality standards, and will provide a specific inspection protocol and time response. Erosion control measures shall be sufficient to ensure compliance with applicable state and federal water quality standards. The ECP shall be maintained on site and shall be available for review upon request. Erosion Control measures shall include (but not be limited to) the following:

(1) The contractor or ONF will have the following on hand: Weed-free straw bales, unsupported silt fence, plastic sheeting, and biobags. The purpose is to address unexpected rain events, or failure of other measures to contain sediment.

(2) Temporary plastic sheeting for immediate protection of unvegetated areas (where seeding/mulching are not appropriate), in accordance with ONF's standard specifications.

(3) Erosion control blankets or heavy duty matting (e.g., jute) may be used on steep unstable slopes in conjunction with seeding or prior to seeding.

(4) Biobags, weed-free straw bales and loose straw may be used for temporary erosion control. Temporary erosion and sediment controls will be used on all exposed slopes during any hiatus in work on exposed slopes.

b. Effective erosion control measures shall be in place at all times during the work. Construction within the 5-year floodplain will not begin until all temporary erosion controls (e.g., straw bales, silt fences) are in place, downslope of project

activities within the riparian area. Erosion control structures will be maintained throughout the life of the project until permanent measures are in place.

c. All temporarily-exposed areas will be seeded and mulched. Erosion control seeding and mulching, and placement of erosion control blankets and mats (if applicable) will be completed on all areas of bare soil within 7 days of exposure within 150 feet of waterways, wetlands or other sensitive areas, and in all areas during the wet season (after October 1). All other areas will be stabilized within 14 days of exposure. Efforts will be made to cover exposed areas as soon as possible after exposure.

d. All erosion control devices will be inspected during construction to ensure that they are working adequately. Condition of erosion control devices will be inspected and recorded daily during the rainy season, weekly during the dry season, monthly on inactive sites. Work crews will be mobilized to make immediate repairs to the erosion controls, or to install erosion controls during working and off-hours. Should a control measure not function effectively, the control measure will be immediately repaired or replaced. Additional erosion controls will be installed as necessary.

e. If soil erosion and sediment resulting from construction activities is not effectively controlled, the engineer will limit the amount of disturbed area to that which can be adequately controlled.

f. Sediment will be removed from sediment controls once it has reached 1/3 of the exposed height of the control. Whenever straw bales are used, they will be staked and dug into the ground 12 cm. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.

g. Where feasible, sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters an aquatic resource. Silt fences or other detention methods will be installed as close as possible to culvert outlets to reduce the amount of sediment entering aquatic systems.

h. A supply of erosion control materials (e.g., straw bales and clean straw mulch) will be kept on hand to cover small sites that may become bare and to respond to sediment emergencies.

i. Heavy Equipment. Heavy equipment use will be restricted as follows.
   (1) When heavy equipment is required, the applicant will use equipment having the least impact (e.g., minimally sized, rubber tired).
   (2) Heavy equipment will be fueled, maintained and stored as follows.
      (a) All equipment that is used for instream work will be cleaned prior to operations below the bankfull elevation. External oil and grease

will be removed, along with dirt and mud. No untreated wash and rinse water will be discharged into streams and rivers without adequate treatment.

(b) Place vehicle staging, maintenance, refueling, and fuel storage areas a minimum of 150 feet horizontal distance from any stream.

(c) All vehicles operated within 150 feet of any stream or water body will be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected will be repaired before the vehicle resumes operation.

(d) When not in use, vehicles will be stored in the vehicle staging area. All equipment that is used for in stream work will be cleaned prior to entering the two-year floodplain and inspected daily, by the project inspector, for leaks prior to entering the flowing stream. External oil and grease will be removed, along with dirt and mud. Untreated wash and rinse water will not be discharged into streams and rivers without adequate treatment.

b. Material removed during excavation shall only be placed in locations where it cannot enter sensitive aquatic habitat. Conservation of topsoil (removal, storage and reuse) will be employed. Material will be covered so it does not erode in the event of rain or wind.

c. Measures will be taken to prevent construction debris, including sandblasting and pressure washing waste or product, epoxy, or fiber reinforced polymer, from falling into any aquatic habitat or below the 2-year flood elevation. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.

d. Project actions will follow all provisions of the Clean Water Act (40 CFR Subchapter D) and DEQ's provisions for maintenance of water quality standards not to be exceeded within the John Day River (OAR Chapter 340, Division 41). Toxic substances shall not be introduced above natural background levels in waters of the state in amounts which may be harmful to aquatic life. Any turbidity caused by this project shall not exceed DEQ water quality standards.

e. The Contractor or ONF will develop an adequate, site-specific Spill Prevention and Countermeasure or Pollution Control Plan (PCP), and is responsible for containment and removal of any toxicants released. The Contractor will be monitored by the ONF Engineer to ensure compliance with this PCP. The PCP shall include the following:

(1) A site plan and narrative describing the methods of erosion/sediment control to be used to prevent erosion and sediment for operations related

to disposal sites, borrow pit operations, haul roads, equipment storage sites, fueling operations and staging areas.

(2) Methods for confining and removing and disposing of excess concrete, cement and other mortars and construction/repair waste products. Also identify measures for equipment washout facilities.

(3) A spill containment and control plan that includes: Notification procedures; specific containment and clean up measures which will be available on site; proposed methods for disposal of spilled materials; and employee training for spill containment.

(4) Measures to be used to reduce and recycle hazardous and non-hazardous waste generated from the project, including the following: the types of materials, estimated quantity, storage methods, and disposal methods.

(5) The person identified as the Erosion and Pollutant Control Manager (EPCM) shall also be responsible for the management of the contractor's PCP.

f. Hazmat booms will be installed in all aquatic systems where:

(1) Significant in-water work will occur, or where significant work occurs within the 5-year floodplain of the system, or where sediment/toxicant spills are possible.

(2) The aquatic system can support a boom setup (i.e. the creek is large enough, low-moderate gradient).

g. Hazmat booms will be maintained on-site in locations where there is potential for a toxic spill into aquatic systems. "Diapering" of vehicles to catch any toxicants (oils, greases, brake fluid) will be mandated when the vehicles have any potential to contribute toxic materials into aquatic systems. This applies to the equipment used for work within the two-year floodplain of the John Day River.

h. No surface application of nitrogen fertilizer will be used within 50 feet of any aquatic resource.

3. To implement Reasonable and Prudent Measure #3 (riparian habitat protection measures), the ONF shall ensure that:

a. Boundaries of the clearing limits will be flagged by the project inspector. Ground will not be disturbed beyond the flagged boundary.

b. Alteration of native vegetation will be minimized. Where possible, native vegetation will be clipped by hand so that roots are left intact. No grubbing. This will reduce erosion while still allowing room to work. No protection will be made of invasive exotic species (e.g. Himalayan blackberry or reed canary grass).

c. Riparian planting (willow, alder, and dogwood) will be conducted in the spring of 2004. Riparian plantings originate from a Forest Service operated nursery program in which hardwood clones (transferred from the project area) would be utilized.

4. To implement Reasonable and Prudent Measure #4 (monitoring) above, the ONF shall ensure that:

a. Within 30 days of completing the project, the ONF will submit a monitoring report to NMFS describing the success meeting their permit conditions. This report will consist of the following information.

(1) Project identification.

(a) Project name
(b) starting and ending dates of work completed for this project; and
(c) ONF contact person.
(d) Monitoring reports shall be submitted to:

National Marine Fisheries Service
Oregon Habitat Branch
Attn: OSB2000-0052
525 NE Oregon Street, Suite 500
Portland, Oregon 97232-2778

(2) Isolation of in-water work area. A report of any capture and release activity must include:

(a) The name and address of the supervising fish biologist;
(b) methods used to isolate the work area and minimize disturbances to ESA-listed species;
(c) stream conditions before and following in stream work;
(d) any incidence of observed injury or mortality.

(3) Pollution and erosion control. Copies of pollution and erosion control inspection reports describing any failures experienced with erosion control measures, efforts made to correct them and a description of any accidental spills of hazardous materials.

(4) Site restoration. Documentation of the following conditions:

(a) Finished grade slopes and elevations.
(b) Log and rock structure elevations, orientation, and anchoring, if any.
(c) Planting composition and density.
(d) A plan to inspect and, if necessary, replace failed plants for two years.

(5) A narrative assessment of the project's effects on natural stream function.

(6) Photographic documentation of environmental conditions at the project site and compensatory mitigation site(s) (if any) before, during and after project completion.

(a) Photographs will include general project location views and close-ups showing details of the project area and project, including pre- and post construction.
(b) Each photograph will be labeled with the date, time, photo point, project name, the name of the photographer, and a comment describing the photograph's subject.
(c) Relevant habitat conditions include characteristics of channels, streambanks, riparian vegetation, flows, water quality, and other visually discernable environmental conditions at the project area, and upstream and downstream of the project.

3. MAGNUSON-STEVENS ACT

3.1 Background

The objective of the essential fish habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

3.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in federal fishery management plans. In addition, the MSA requires federal agencies to consult with NMFS on activities that may adversely affect EFH.

'EFH' means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of EFH: 'Waters' include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; 'substrate' includes sediment, hard bottom, structures underlying the waters, and associated biological communities; 'necessary' means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH.
- NMFS shall provide conservation recommendations for any federal or state activity that may adversely affect EFH.
- Federal agencies shall within 30 days after receiving conservation recommendations from NMFS provide a detailed response in writing to NMFS regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.3 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), and Puget Sound pink salmon (*O. gorbuscha*)(PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (i.e., natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Actions

The proposed actions are detailed above in Section 1.2, Proposed Action. The action area is defined as the streambed and riparian habitat of Rock Creek extending 50 feet upstream of the area of disturbance, and extending downstream from the area of direct disturbance to the extent of any visible turbidity plume. This area has been designated as EFH for various life stages of chinook salmon.

3.5 Effects of Proposed Action

As described in detail in Section 1.5, Analysis of Effects, the proposed activities may result in detrimental short- and long-term adverse effects to a variety of habitat parameters. These impacts include: Increases in turbidity, disturbance to the beds and bank of the river, removal of riparian vegetation, and the potential for pollutants to enter the water.

3.6 Conclusion

NMFS believes that the proposed action may adversely affect the EFH for chinook salmon.

3.7 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation recommendations for any federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the ONF and all of the Reasonable and Prudent Measures and the Terms and Conditions contained in Sections 2.2 and 2.3 are applicable to salmon EFH. Therefore, NMFS incorporates each of those measures here as EFH conservation recommendations.

3.8 Statutory Response Requirement

Please note that the Magnuson-Stevens Act (section 305(b)) and 50 CFR 600.920(j) requires the federal agency to provide a written response to NMFS after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NMFS, the agency must explain its reasons for not following the recommendation.

3.9 Supplemental Consultation

The ONF must reinitiate EFH consultation with NMFS if either action is substantially revised or new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920).

4. LITERATURE CITED

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion.

Busby, P., S. Grabowski, R. Iwamoto, C. Mahnken, G. Matthews, M. Schiewe, T. Wainwright, R. Waples, J. Williams, C. Wingert, and R. Reisenbichler. 1995. Review of the status of steelhead (*Oncorhynchus mykiss*) from Washington, Idaho, Oregon, and California under the U.S. Endangered Species Act. 102 p. plus 3 appendices.

Busby, P., T. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, and I.V. Lagomarsino. 1995. Status review of west coast steelhead from Washington, Idaho, Oregon, and California

DEQ 1996. 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1996. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

DEQ 1998. Draft 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1998. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

DSL 1996. Essential Indigenous Salmonid Habitat, Designated Areas, (OAR 141-102-030). Oregon Division of State Lands. Portland, Or. 1996.

NMFS (National Marine Fisheries Service) 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon.

ODFW 1996. Database -- Salmonid Distribution and Habitat Utilization, Arc/Info GIS coverages. Portland, Or. 1996. (rainbow.dfw.state.or.us/ftp/).

Oregon Department of Administrative Services. 1999. Oregon economic and revenue forecast. Vol. XIX. No. 2. Office of Economic analysis, Salem.

PFMC (Pacific Fishery Management Council). 1999. Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and Identification of Essential Fish Habitat, Adverse Impacts and Recommended Conservation Measures for Salmon. Portland, Oregon.